

WHAT IS CLAIMED IS:

1. A loudspeaker array comprising at least one line source, said at least one line source comprising a curved one dimensional array of loudspeakers, each of which has a dispersion pattern angle of less than 60° in a plane which is perpendicular to a one dimension of said one dimensional array at said loudspeakers said loudspeakers having propagation axes in a common plane which, in use, is vertical, each adjacent pair of said loudspeakers of each said line source being physically time-aligned in a direction bisecting said propagation axes of said loudspeakers of said adjacent pair.
2. An array as claimed in claim 1, in which said dispersion pattern angle of at least one of said loudspeakers is less than 50° in said plane perpendicular to said one dimension.
3. An array as claimed in claim 1, in which said dispersion pattern angle of at least one of said loudspeakers is less than 40° in said plane perpendicular to said one dimension.
4. An array as claimed in claim 1, in which said dispersion pattern angle of at least one of said loudspeakers is less than 30° in said plane perpendicular to said one dimension.
5. An array as claimed in claim 1, in which said dispersion pattern angle of at least one of said loudspeakers is less than 20° in said plane perpendicular to said one dimension.
6. An array as claimed in claim 1, in which said dispersion pattern angles of all of said loudspeakers of said at least one line source have the same value in said plane perpendicular to said one dimension.

7. An array as claimed in claim 1, in which said dispersion pattern angle of an upper one of said loudspeakers of said at least one line source is less than said dispersion pattern angle of a lower one of said loudspeakers.
8. An array as claimed in claim 1, in which all of said loudspeakers of said at least one line source have a same dispersion pattern angle in said common plane.
9. An array as claimed in claim 1, in which each of said loudspeakers is horn-loaded.
10. An array as claimed in claim 9, in which each of said loudspeakers comprises inner and outer horn-loading members defining therebetween a single sound propagation channel whose shape perpendicular to said propagation axes is topologically equivalent (isomorphic?) to an annulus.
11. An array as claimed in claim 1, in which each of said loudspeakers is arranged to produce a substantially plane wave throughout a frequency range of said loudspeaker.
12. An array as claimed in claim 1, in which said at least one line source comprises at least three said loudspeakers.
13. An array as claimed in claim 1, in which said common plane contains said one dimension.
14. An array as claimed in claim 1, in which said propagation axes of adjacent pairs of said loudspeakers in said at least one line source subtend an angle greater than 0° and less than substantially 10° .
15. An array as claimed in claim 1, in which said propagation axes of an upper pair of said loudspeakers of said at least one line source subtend a smaller angle than said propagation axes of a lower pair of said loudspeakers.

16. An array as claimed in claim 1, in which said at least one line source is convex.
17. An array as claimed in claim 1, in which said loudspeakers of said at least one line source are disposed on an arc which is part of one of a circle, a catenary, a parabola and a hyperbola.
18. An array as claimed in claim 17, in which said loudspeakers of said at least one line source are arranged to radiate away from a centre of curvature of said arc.
19. An array as claimed in claim 1, in which said loudspeakers of said at least one line source are of a same type.
20. An array as claimed in claim 1, having a frequency range from substantially 250Hz to substantially 7KHz.
21. An array as claimed in claim 1, comprising a plurality of said line sources disposed laterally adjacent each other.
22. An array as claimed in claim 21, in which said common plane of an adjacent pair of said line sources subtend an angle substantially equal to half a sum of said dispersion pattern angles, in said planes perpendicular to said one dimensions, of first and second ones of said loudspeakers in first and second ones, respectively, of said adjacent pair of said line sources.
23. An array as claimed in claim 21, in which adjacent pairs of said loudspeakers in different ones of said line sources are physically time-aligned in a direction bisecting said propagation axes of said adjacent pair of said loudspeakers.
24. An array as claimed in claim 21, in which said loudspeakers of said line sources are of a same type.

25. An array as claimed in claim 21, in which said line sources comprise first and second sets, said loudspeakers of each said line source of said first set having a first frequency range and said loudspeakers of each said line source of said second set having a second frequency range different from said first frequency range.
26. An array as claimed in claim 25, in which said first frequency range is one of substantially contiguous and overlapping with said second frequency range.
27. A loudspeaker system comprising a plurality of loudspeaker arrays, each of which comprises at least one line source, said at least one line source comprising a curved one-dimensional array of loudspeakers, each of which has a dispersion pattern angle of less than 60° in a plane which is perpendicular to a one-dimension of said one-dimensional array at said loudspeaker, said loudspeakers having propagation axes in a common plane which, in use, is vertical, each adjacent pair of said loudspeakers of each said line source being physically time-aligned in a direction bisecting said propagation axes of said loudspeakers of said adjacent pair.
28. A system as claimed in claim 27, in which a curvature of each said line source of a first of said loudspeaker arrays is different from a curvature of each said line source of a second of said loudspeaker arrays.